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THE CODFISH INDUSTRY IN NORTHERN PORTUGAL

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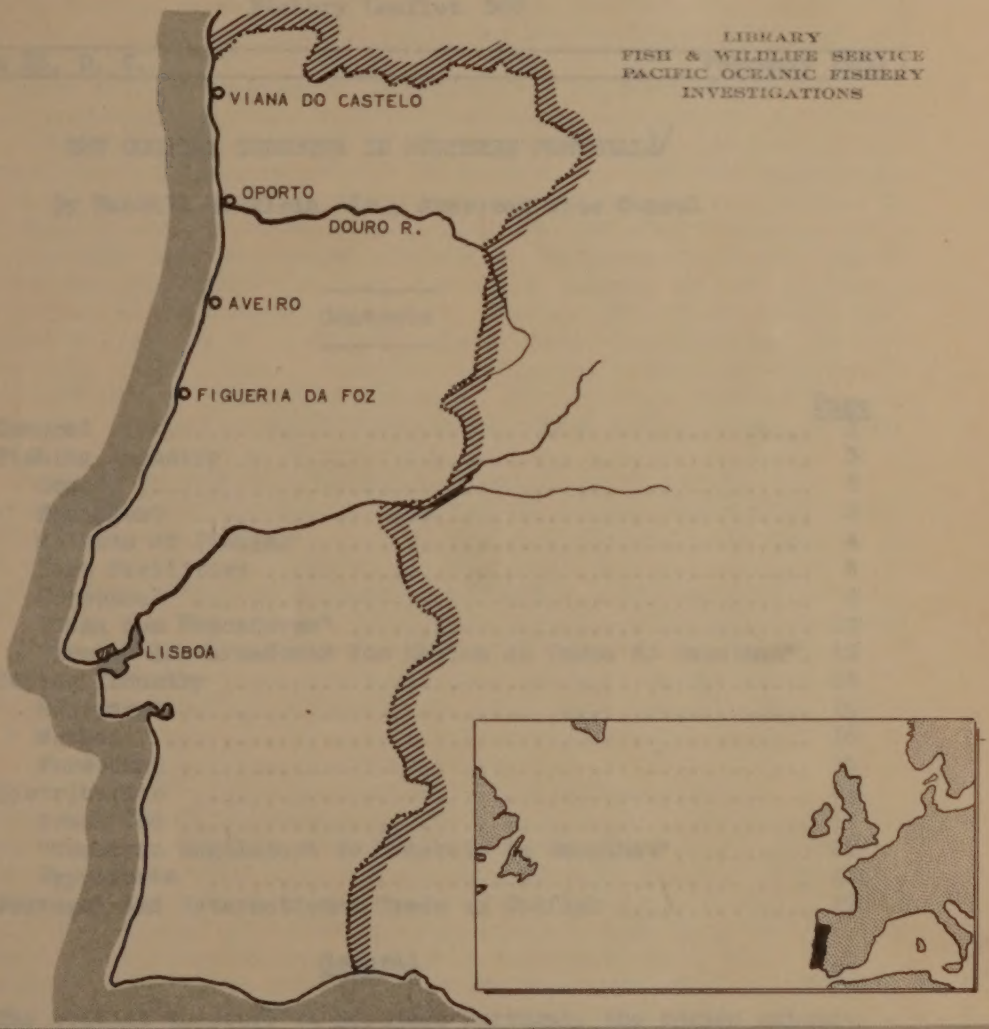

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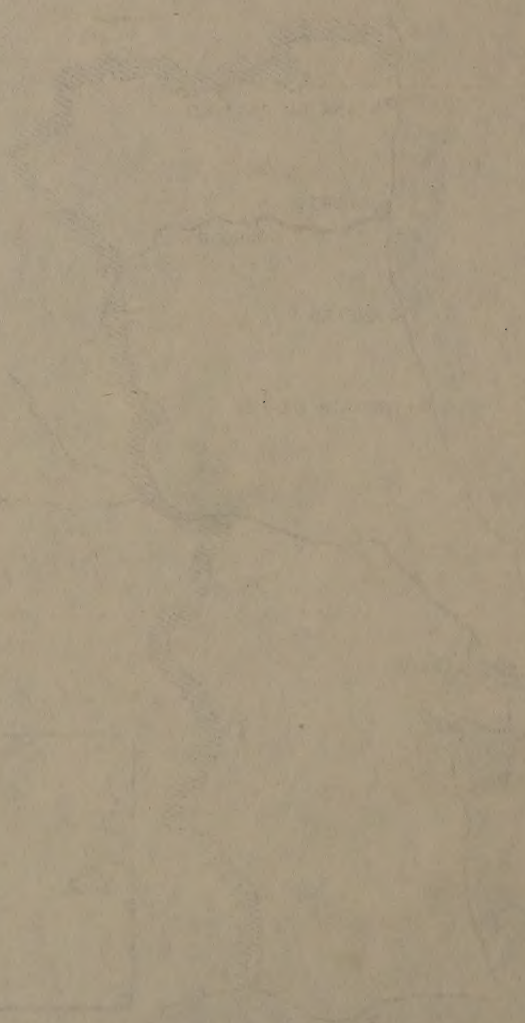

United States Department of the Interior, Oscar L. Chapman, Secretary
Fish and Wildlife Service, Albert M. Day, Director

Fishery Leaflet 367

Washington 25, D. C. February 1950

THE CODFISH INDUSTRY IN NORTHERN PORTUGAL[1/]

By Randall T. Klein, Jr., American Vice Consul

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General

The codfish industry in Northern Portugal, the region extending from Figueira da Foz to the Spanish border, is not only an important industry in the region but also one of the most important industries in the country, representing a capital investment of about $14,000,000. The history of the industry is long, and the earliest reports are undoubtedly mixtures of fact and fiction. Some even claim that Portuguese fishing vessels found America before Columbus. However, it is known that

1/ American Consulate Report No. 26, Oporto, Portugal, October 10, 1949.

such vessels sailed from Oporto on the Douro River as early as 1497 to fish on the Grand Banks. Portuguese fishing activity has varied considerably through the years, but, regardless of this, dried codfish has constantly remained a basic item in the Portuguese diet. Northern Portugal alone with a population of about 4,000,000 consumes an average of twelve percent of the world codfish production at present levels, and even then the demand is not entirely filled.

Today Portugal is one of the foremost producers (ten percent) as well as a principal consumer (twenty percent) and importer in the world codfish market. The production side of the industry is now of particular importance: it is a great saver of foreign exchange; it is a good provider of a basic item in the national diet; and it employs directly an estimated 6,000 persons in the North excluding wholesale and retail sales people. In 1948 the North produced an estimated 21,000 tons of undried codfish valued at 130,000 contos, which was converted to 15,500 tons of dried fish valued at 147,000 contos. This constitutes over seventy-five percent of the Portuguese production. Portugal, in addition to using almost the entire production herself as exports are negligible, imported three tons of undried cod worth 21 contos and 23,302 tons of dried cod worth 248,304 contos. (One conto equals approximately $34.)

Within the North the production is divided roughly as follows: Oporto 36 percent; Aveiro 40 percent; Figueira da Foz 12 percent; Viana do Castelo 12 percent.

Since 1936 a program of expansion has been carried out under government auspices. The fishing fleet has been modernized and increased, forty-six new ships having been added, partially as replacements, during this period. Almost half of these ships are large modern trawlers added since 1940, and there are still two trawlers in Dutch yards and a lugger at Figueira da Foz to be completed.

Future programs depend largely upon the abundance of fish on the Grand Banks; the availability of exchange for foreign purchases; and the restrictions imposed by the Sub-area Panels under the International Convention for Northwest Atlantic Fisheries. Portugal is represented on three of the five panels which may establish fishing seasons; close spawning or small fish areas; establish size limits; prohibit the use of certain types of fishing gear or appliances, and prescribe over-all catch limits. The trawlers may be especially affected by the convention as trawls have no respect for the type of fish they catch, and, as the fish are dead when brought aboard, small or spawning fish cannot be returned.

Because demand remains considerably in excess of supply, the government controls the codfish trade quantitatively to the wholesale level and sets the prices paid by the wholesalers, retailer, and consumers to assure a relatively equitable distribution. Because the cod shortage has become almost constant, it is considered a major problem which the local codfish industry must overcome by greater production.

Fishing Industry

Season

There is no set season for cod fishing, but the cold and stormy winter months of the Banks are avoided in so far as possible. The weather of the months of April through July is preferred, and the quality of the fish appears to run highest about October. The two types of codfishing ships, luggers and trawlers, have different seasons for all practical purposes. The luggers usually sail in the first two weeks of April and remain on the banks an average of nearly six months before returning with full cargoes. The larger, speedier, and more sea-worthy trawlers, on the other hand, sail in late February and early March. Usually they are able to return in July with one cargo and return for their second trip which is generally completed in early December. The trawlers thus spend eight months fishing on the Banks.

Equipment

The luggers of the Portuguese cod fishing fleet are almost all products of the local ship building industry at Viana do Castelo, Aveiro and Figueira da Foz, most of them having been built after World War I. However, there remains one ship built at the end of the last century which still relies entirely upon her sails for power. The rest of the ships classed as luggers may be divided into two groups: those to which the small gasoline or diesel motors are only auxiliaries, and those with large diesel motors or steam engines to which the sails are auxiliaries. The first group vary from three hundred to seven hundred tons deadweight, and the latter are the four most recent luggers which run slightly over one thousand tons deadweight. Most of the luggers are constructed of oak and pine and carry four masts. Their engines and auxiliaries are of a wide variety of makes. Today the cost of a new fully rigged and equipped lugger is estimated at about $150,000.

Only one of the trawlers has been constructed in Portugal, having been completed two years ago at Figueira da Foz. The rest are mainly Dutch built, but there are also English, Danish and Norwegian built ships. In size the ships vary from 1,000 to 2,000 tons deadweight, depending partially upon the mode of construction. Some are entirely of steel construction; others a combination of wood and steel; and still others almost totally wood. Motive power is diesel in all cases and is sufficient to give the trawlers 10 knots speed with trawls out and fully laden. The powerful power plants give these ships the secondary advantage of rapid journeys to and from the Banks, enabling them to complete the two annual trips with ease. Completely equipped, the latest and largest trawlers have cost about $700,000.

Trawling gear for one ship usually consists of two trawls actually being worked and two in reserve. The cable must be bought abroad, but the large nets capable of holding over ten tons of fish and the large paravanes which keep the net open are manufactured in Portugal.

The life of a trawl depends upon its luck in keeping away from rock bottoms and other obstructions. A full set today costs the equivalent of about $1,200.

The increase in the fishing fleet was, until 1946, subsidized directly through special government grants and through percentages of taxes on codfish set aside for this purpose. In general the government paid 20 percent of the cost of new constructions. Today the only aid furnished is a provision for 10 year 20 installment loans at low interest. Taken as a whole, the Portuguese cod fishing fleet is modern and kept in excellent repair.

Methods of Fishing

Both luggers and trawlers are now equipped with supersonic echo ranging devices for locating cod. Unfortunately neither a shortened fishing season nor increased production have resulted so far because of the decrease in the number and size of the fish on the Banks. In general, the new method has only allowed the ships to hold their own.

The luggers are essentially bases for their dory crews, for no fishing is done from the luggers. Each ship carries about twenty-five dories and two men per dory. The men are dropped off singly or in pairs, in their dories over the fish and the lugger lies off. Usually one man rows while the other tends the lines until such times as there are enough fish to warrant both men working lines. A line is sixty meters long and is armed with as many hooks as the individual fisherman desires. One man usually tends ten or twelve lines at once. The hooks are not baited for the cod are caught usually through the side either by the fisherman jerking the line or by being caught by a hook being slowly trawled or jerked by wave motion. As is apparent, the efficacy of this method depends upon the concentration of the fish below the dory and by the speed with which the fishermen can jerk their lines and pull in their catches. In a heavy concentration the fisherman will often catch several cod on each line before pulling them in. The top fishermen will catch thirteen tons of cleaned cod in a season.

Dory fishing is a difficult, uncomfortable, and dangerous occupation, not only because of the nature of the work itself, but also because of the frequent fogs and heavy weather in the fishing area.

The catch of the luggers is increased to some extent by a second fishing method known as trawl-line or long-line fishing. The equipment is simply two buoys with a 500 meter line between them, to which line a tremendous number of vertical lines with hooks are attached. The hooks are baited with Norwegian mackerel or Portuguese sardines, and the apparatus is usually left to stand overnight to be picked up in the morning. If the fish are biting well, a dory may work back and forth along the line. As will be shown later, a different pay system is used for the fish caught by trawl line or long line from that caught by line fishing.

The trawlers ordinarily run one trawl alternating from side to side towards the bow. Trawling speed is ten knots, and the trawl is run at the depth indicated as best by the sounding gear. If a particularly fine concentration of fish is found, two trawls may be set at once. A run of three to four hours in fish will fill the trawl net with six to ten tons of fish. The superior efficiency of the trawls appears to doom the luggers, but the latter will probably receive some respite from Sub-Area restrictions under the fishery convention. Line-fishing permits the return of many undersized or spawning fish as they are alive when landed; trawled fish are dead.

Both luggers and trawlers follow the same system with landed catches. The first man in line cuts off the head and removes the tongues and cheeks. The next man removes the tripe and separates the liver which is passed to a liver packer. The fish is then scaled by another and then finally salted and stored by another.

Port Facilities

The two principal ports for the cod fleet are Oporto and Aveiro with Figueira da Foz and Viana do Castelo of lesser importance.

As even the largest trawlers are relatively small ships, the River Douro at Oporto usually presents a satisfactory port for these ships. Only when fall and winter rains are delayed or insufficient and the bar at the mouth of the river makes the entrance dangerous, is this port unsatisfactory. Then the deep water port at Leixoes may be used for loading and unloading operations if necessary. There are no ways of sufficient size for any but the smallest luggers, but certain shallow anchorages are used which enable bottom work and repairs at low tide. Adequate machine shops and ships carpenters are available.

The harbor entrance at Aveiro has been improved so that today it is the best for the cod fleet. Further improvements on breakwaters at the entrance are underway. The waterfront extends for many miles within the harbor; so it is possible in nearly all cases for the ships to dock at the drying warehouses and unload directly. Several ways are available for various sized ships, and machine shop facilities are adequate. However, as in the case of Oporto, most of the work on bottoms is done at low tide in shallow anchorages.

Both Figueira da Foz and Viana do Castelo present the problem of entrances largely closed by sand bars. Thus the usefulness of both ports has been restricted, though both have better ways than Oporto and Aveiro, nearly all of the luggers having been built in these ports. Unless some measures are taken, the importance of these ports must diminish further. The measures have been proposed, but no action has been taken. Machine shop facilities are only fair, but Aveiro and Oporto are close enough that their facilities may be used.

Personnel

Personnel of the fishing industry may be divided into the following groups: owners; shore employees; masters, mates, navigators and cadets; fishermen; and machinists (radio operators form such a small percentage that the details concerning them are being omitted). The working relationships of these groups are governed in some detail by collective contracts, except for the shore employees who are hired individually by the owners. As the duties of the three hundred odd shore employees vary greatly including all kinds of office and administrative work, their compensation varies accordingly and no collective contract would adequately deal with such a complicated situation. The monthly pay roll for these employees is estimated at the equivalent of $30,000.

The most important contract is the "Contrato Colectivo de Trabalho, Campanha de 1949," drawn between the "Gremio dos Armadores de Navios da Pesca do Bacalhau," a corporative government organization of the ship owners, and the "Junta Central da Casa dos Pescadores," a like organization for the fishermen. The contract is negotiated under the auspices of the "Subscretario de Estado das Corporacoes e Previdencia Social" (Undersecretary of State for Corporations and Social Welfare), an undersecretary of the Ministry of Economy who must approve the contract. The contract for 1949 is considered to be a basic contract which will continue in the following years subject to proposals for changes, which must be made by December of the year before the year in which it is desired they take effect. Changes require the same negotiations and approval as the original contract.

The second chapter of the contract covers the recruiting and classification rules for the fishermen, of which there are about 2,800 in the North. The "Gremio dos Armadores" keeps a list of all of the fishermen and classifies them by the previous season's catch according to the following table:

SPECIALISTS -	FISHERMEN CATCHING	OVER 153	QUINTALS*
1ST LINES -	"	115-153	"
2ND LINES -	"	85-115	"
3RD LINES -	"	60- 85	"
APPRENTICES -	"	BELOW 60	"

*ONE QUINTAL IS 60 KILOGRAMS.

Secondly a percentage basis is set for the composition of the crews. For a lugger the basic crew is 20 percent specialists, 30 percent 1st line, 30 percent 2nd lines, 10 percent 3rd lines, and 10 percent apprentices; for a trawler it is 80 percent specialists and 20 percent apprentices. The better living and working conditions and usually higher pay on the trawler are the reasons that the specialist percentage is so high, thus giving the older and better fishermen a certain bonus. At the same time the higher percentage of apprentices is to save the older men from the more menial work and to train the young men for the trawler fleet which should eventually replace the luggers. The percentages are

only basic, and they are varied in accordance with the actual number of fishermen in the various classes. Today there are only about half of the desired line classifications, over twice the specialist classifications, and a small excess of the apprentices. In addition to the above fishermen nearly every ship carries a number of boys below the age of 19 who come from the fishing schools. These boys are ineligible for classification and no crew quotas are set for them. The chapter goes on to describe in detail the selection methods within the crews for special jobs such as salters and cleaners and to give machinist classification details.

Intended crew lists must be approved by the Gremio before they are opened for signing, and, except with special authorization, matriculation must be completed by February fifteenth. Normally the crew of the previous year is recruited again so far as the fishermen desire, and then the vacancies are filled. A delegate of the Ministry of Economy must approve the completed lists. Fishermen may be fired for only certain specified reasons such as drunkeness or insubordination, and a full report must be made to the Gremio and the "Casa dos Pescadores" and their authorization received. On the other hand a fisherman cannot leave a crew except with justification, and he must make a report to the "Casa dos Pescadores."

Chapter three specifies the remuneration for the crews. As nearly all luggers have both line and trawl line fishing, two salary tables are here combined to demonstrate the prevailing pay system. The salaries are monthly.

LUGGERS

CATEGORY	SALARY	FIXED COMPLEMENT
QUARTERMASTER	Esc. 5900.00	Esc. NONE
MACHINIST	4500.00-6250.00	"
MACHINIST, ASSISTANT	4200.00	"
COOK	5500.00	"
COOK ASSISTANT	4200.00	"
BOY	3550.00	"
FISHERMAN	5000.00	IF ALSO SEAMAN 250.00 SALTER 350.00-500.00 SCALER 250.00-400.00 CLEANER 150.00 MISC. 50.00

CATEGORY	VARIABLE COMPLEMENT	
	LINE FISHING	TRAWL OR LONG-LINE FISHING
QUARTERMASTER	SEE FISHERMAN	SEE FISHERMAN
MACHINIST	Esc. 1.40-2.00/QUINTAL*	Esc. .80-1.00/QUINTAL
	" .10- .25/K. LIVER OIL	" .10- .25/K. LIVER OIL
MACHINIST, ASSISTANT	" .70/QUINTAL*	UP TO Esc. 2500.00 ACCORDING TO SERVICE
COOK	" 1.20/QUINTAL*	Esc. .65/QUINTAL
COOK ASSISTANT	" .70/QUINTAL*	-"-
BOY	2,000.00-2,500.00	-"-

		SPECIALISTS	OTHER
FISHERMAN	EACH QUINTAL TO 100- Esc. 20.00	Esc. 12.00	Esc. 10.00
	" " 101-150 26.50	15.00	13.00
	" " 151-200 32.00	18.00	16.00
	"OVER 200 35.00	20.00	19.00

(A BONUS OF Esc. 200.00 IS GIVEN AT THE 200 QUINTAL MARK)

* VARIABLE COMPLEMENT BASED ON THE AVERAGE FOR 30 FISHERMEN. ($1.00 EQUALS ESCUDOS 28.60)

TRAWLERS

CATEGORY	SALARY	COMPLEMENTS
ELECTRICIAN	Esc. 1075.00	Esc. .25/QUINTAL
FIREMAN	836.00-876.00	" .15-.20 "
TRAWL MASTER	1142.50	" .40 "
QUARTERMASTER	1075.00	" .30 "
COOK	940.00	" .30 "
COOK ASSISTANT	737.50	" .17 "
NET FISHERMAN	850.00	" .25 "
CHIEF SALTER	872.50	" .27 "
SALTER	850.00	" .25 "
SCALER	850.00	" .25 "
SCALER APPRENTICE	737.50	" .21 "
FISHERMAN	737.50	" .20 "
APPRENTICE	670.00	" .17 "
BOY	643.00	" .15 "
BOY FIRST TRIP	562.00	" .10 "

The monthly salaries are further increased by clause No. 54 of Chapter VII which is revised annually in accordance with rises and falls in price levels in Portugal. For 1949 all persons covered by this contract receive an increase of 65 percent of the complements. In addition to salary the men also receive an amount of clothing, tobacco and other items specified in the contract.

The contract goes into great detail on the actual payment system, which is quite complicated. Most important is the fact that the crew must be represented at the weighing of the cargo. Special provisions are made for cases of fire, shipwreck, or lack of a second voyage in the case of a trawler, all of which provisions assure the men that they will receive approximately full pay.

The duties of the crews are outlined in general in Chapter IV, which also provides that the men must present a satisfactory medical certificate from the Gremio or from the "Casa dos Pescadores" to be eligible to be hired.

A system of insurance and welfare is partially covered in Chapter V. The Gremio is required to pay an unspecified amount to the "Casa dos Pescadores", which amount is usually about equal to $20,000.00. For each fisherman the Gremio pays Esc. 600.00 to the fishermen's retirement fund, and each man must pay to the same fund Esc. 250.00. A pension of Esc. 400.00 is received after reaching 62 years of age.

The owners are obliged to insure the effects of each man for Esc. 3,500.00 with the "Mutua dos Navios Bacalhoeiros" and to insure with the same mutual against permanent incapacity and death. The annual pensions are specified in the contract and vary from Esc. 6,100.00 for boys to Esc. 18,000.00 for the highest class machinists plus the annual salaries in the case of the various classes of fishermen. There is a further death benefit of Esc. 10,000.00 liquidated over a period of

four years. If receipts of the mutual are in excess of computed obligations, additional amounts are given to surviving families during the first four years after the principal's death.

From the pay of a fisherman who has a house built by the Gremio the amount of the down payment is deducted by the employer and given to the Gremio. The employer does the same with one half percent of the salaries and complements, and the employer must further add another seven percent, the total 7½ percent being paid to the "Casa dos Pescadores" by the Gremio for welfare use.

A salary compensation fund is set up by Chapter VI of the contract, which fund guarantees half pay during sickness. The ship owners pay whatever amounts are necessary in proportion to their catches.

Chapter VII, the last chapter of the contract, deals with a variety of changeable and unrelated details such as renunciation of salvage rights, the cost of living percentage increase, and the setting of April 15 as the date by which all ships should sail if not accorded special permission by the Gremio.

The masters, mates, navigators, and cadets have their own collective contract with the Gremio. Their bargaining body is another government corporation, the "Sindicato Nacional dos Capitaes, Oficiais Nauticos e Comissarios da Marinha Mercante." The 1949 contract, which may be renewed in the same way as the fishermen's contract, provides for their hire by January 30; but there is no obligation of any sort for an owner to hire the same officers as in the previous year, except that captains' contracts continue unless rescinded by one party.

The salaries fixed in the contract are as follows (All figures are Escudos):

LUGGERS

CATEGORY	SALARY	COMPLEMENT
CAPTAIN	1200.00/MO.	THE CAPTAINS' COMPLEMENTS ARE BASED ON DRIED FISH; THE REST ON FRESH. OFFICERS EXCEPT CAPTAIN HAVE COMPLEMENTS BASED ON AN AVERAGE MAN'S CATCH USING A 30 FISHERMEN BASE.
MATE	800.00/MO. UNTIL SAILING 5500.00 FOR SEASON	
NAVIGATOR	650.00/MO. UNTIL SAILING 5000.00 FOR SEASON	
CADET	450.00/MO. UNTIL SAILING 3000.00 FOR SEASON	

CATEGORY	COMPLEMENTS	
	LINE FISHING	TRAWL OR LONG-LINE FISHING
CAPTAIN	9.00/QUINTAL FOR 2/3 CARGO 13.00/ " " 1/3 " .50/KILO COD LIVER OIL	6.00/QUINTAL 13.00/ " .20 KILO - OIL
MATE	2.50/QUINTAL .30/KILO LIVER OIL	1.80/Q. ON 2/3 CARGO 2.30/Q. 1/3 CARGO .10/KILO - OIL
NAVIGATOR	2.30/QUINTAL .20/KILO LIVER OIL	1.10/Q. ON 2/3 CARGO 2.10/Q. ON 1/3 " .10/KILO - OIL
CADET	1.80/QUINTAL .10/KILO LIVER OIL	1.30/Q. ON 2/3 CARGO 1.70/Q. ON 1/3 " .05/KILO - OIL

TRAWLERS

CATEGORY	SALARY
CAPTAIN	1500.00/MO. AT SEA 2000.00/MO. IN PORT
MATE	1000.00/MO. AT SEA 1600.00/MO. IN PORT
NAVIGATOR	800.00/MO. AT SEA 1000.00/MO. IN PORT
CADET	550.00/MO.

CATEGORY	COMPLEMENT
CAPTAIN	ESC. 1.50/Q. TO 10,800 Q.; 2.50/Q. ABOVE 10,800 Q. .30/KILO COD LIVER OIL.
MATE	.50/Q. TO 10,800 Q.; .75/Q. " " " .25/KILO COD LIVER OIL.
NAVIGATOR	.40/Q. TO 10,800 Q.; .65/Q. " " " .20/KILO COD LIVER OIL.
CADET	.20/Q. TO 10,800 Q.; .30/Q. " " " .10/KILO COD LIVER OIL

A food allowance is set at Escudos 30.00 per day for captains and Escudos 25.00 per day for the other officers. The captains receive a 40 percent increase salary and 50 percent on complements on luggers; 45 percent and 55 percent respectively for trawler captains and all other officers. All captains receive one third of the cheeks and tongues.

As in the fishermen's contract, the duties of the officers are specified, salvage rights are waived, and payment methods are outlined. The salary system in cases of shipwreck, fire, etc., is the same. Mates and navigators are required to complete a nursing course, and the owners must insure the effects of captains for Escudos 15,000.00 and others for Escudos 13,000.00.

The Gremio is required to furnish medical aid to the officers and their families. Permanent incapacity or death pension annual rates are as follows:

CATEGORY	LUGGER	TRAWLER
CAPTAIN	Esc. 18,000.00	Esc. 18,000.00
MATE	18,000.00	18,000.00
NAVIGATOR	16,500.00	18,000.00
CADET	11,500.00	14,400.00

An Escudos 10,000.00 death payment and additional variable amount are the same as for the fishermen.

Yet another corporation makes the contract with the Gremio for the trawler machinists, the "Sindicato Nacional dos Oficiais Maquinistas da Marinha Mercante." Their hiring rules are the same as for the deck officers, and so are their clauses on salvage, medical assistance, and Escudos 10,000.00 death payment. Their duties are, of course, outlined in the contract. First machinists' effects are insured for Escudos 13,000.00; the other for Escudos 10,000.00. They receive a 45 percent addition on salary; a 55 percent addition on complements; and another 10 percent addition on salary during actual fishing.

PAY TABLE (ALL FIGURES ARE ESCUDOS)

CATEGORY	SALARY	COMPLEMENT	FOOD
1ST MACHINIST	1500.00 AT SEA 2000.00 IN PORT	.75/Q. TO 10800 Q. 1.00/Q. ABOVE 10800 Q.; .25/K. LIVER OIL	30.00 P. DAY
2ND MACHINIST	1000.00 AT SEA 1600.00 IN PORT	.45/Q. TO 10800 .60/Q. ABV. " .25/K. LIVER OIL	25.00 "
3RD MACHINIST	800.00 AT SEA 1100.00 IN PORT	.30/Q. TO 10800 .40/Q. ABV. " .16/K. LIVER OIL	25.00 "
ASSIST. "	550.00	.17/QUINTAL	15.00 "

ANNUAL PENSION TABLE

CATEGORY	AMOUNT
1ST MACHINIST	18,000.00 Escudos
2ND MACHINIST	18,000.00 "
3RD MACHINIST	13,400.00 "
ASSIST. MACHINIST	7,900.00 "

"Casa dos Pescadores"

The "Casa dos Pescadores" (House of Fishermen), was founded in 1940 as a government corporation and had existed informally for several years prior to that date. Today it has branches in every important fishing community and embraces all the various types of commercial fishermen and their families. Each branch has a board of directors elected by the fishermen, the presidency of the board automatically going to the local Captain of the Port. The local finances are governed by the board and are published monthly.

The first duty of the organization is to represent the fishermen in the collective bargaining process. In the codfish industry the representation is done by the "Junta Central" or central board, of the "Casa" in Lisbon rather than through a delegation system of the branches.

The primary activity of the Casa is its social work which carries on throughout the year. As a social project the "Casa dos Pescadores" is one of the most successful projects in the country. Financially the Casa is supported by a system of taxes membership fees, lump sum payments by the fishing industries, and interest from the funds administered by it. These funds are the "Fundo de Reforma dos Pescadores," the retirement fund; the "Fundo de Compensacao das Soldadas dos Pescadores," the salary compensation fund; the funds received from the mutual insurance of the Gremio for the payment of the various types of benefit to the fishermen or their families, and the funds of the "Serviços de Abono de Familia e Assistencia da Junta Central das Casas dos Pescadores." This last fund is the principal one which is made up from the 7 percent pay roll tax paid by the employers and 1/2 percent paid by the employees. It is distributed to the branches in proportion to their membership.

The "Abono de Familia" is an annual payment of Escudos 500.00 for each child of school age, and the rest of the fund is used for the Casa's social projects. In the North it supports five fishing schools to train fishermen's sons in all the types of fishing carried on by Portuguese fleets, and also supports the agricultural schools for those boys who have no aptitude for fishing. Each port has at least one medical center, a nursing service, and nurseries for the children of working mothers. The codfishing ports all have baby clinics, lying-in hospitals, and special care for old fishermen no longer able to sail. A relatively new activity is the construction of low cost housing projects for the fishing communities.

"Gremio dos Armadores dos Navios de Pesca do Bacalhau"

In 1934 this Gremio or employers organization was incorporated as a government corporation under the Marine Ministry. As previously indicated its first duty is to represent the ship owners in collective bargaining processes. It is further responsible for policing its membership to insure the correct fulfillment of its obligations, which are many and complicated. As the ship owners are also the owners of the curing installations, the Gremio represents the owners in the curing personnel contract negotiations.

The commerce of dried codfish is government regulated, so this Gremio must further represent the owners in their dealings with the "Comissao Reguladora Do Comercio de Bacalhau," the government regulating body, and the "Gremio dos Armazenistas," the food wholesalers organization. The activities of the ship owners' Gremio in connection with these latter organizations will be discussed in the section pertaining to these organizations.

Financially the Gremio is supported by a tax of Escudos 12.00 per quintal of fresh cod and the insurance premiums for the mutual. Because of the diversity of the Gremios activities and its administration of eleven funds, its general accounts, and the mutual, the finances defy any general description.

The "Mutua dos Navios Bacalhoeiros," in addition to carrying the various types of insurance required by the work contract, insures the ships and for loss of fish as well and is allowed to make loans from its funds for ship construction.

The Gremio maintains medical centers in each of the cod fleet ports for treatment of the fishermen and their families during the fishing season and the officers and their families throughout the year. It uses the same facilities for the curing industry personnel while they are working.

More important is the hospital ship, the "Gil Eanes" which the Gremio sends to the Banks with the fleet. It has proved invaluable in raising morale, treating injured and sick seamen, picking up crews of wrecked ships; sending and receiving personal messages of the fishermen and their families in Portugal, serving as a supply ship of small sundry items and small supplies of salt, fuel, potatoes and onions, and serving as a study and information base about current fishing conditions. Free emergency care has been given to fishermen of other nationalities as well. The "Gil Eanes" usually makes two trips a year, roughly corresponding to the movement of the trawlers, and she partially pays her way by the supply activities and by returning to Portugal with full cargoes of dried cod.

Before the housing activity of the "Casa dos Pescadores" the Gremio built projects in Aveiro and Viana do Castelo, the amortization which is yet to be made. The welfare activity of the Gremio, in addition to the medical care and the money given to the "Casa dos Pescadores," extends to especially needy families of fishermen which are given cash gifts.

The Gremio further acts as far as the fishing part of its activities are concerned as a tax assessing and collecting agent for the government. The Gremio transfers the necessary amount from its general funds to the "Fundo Corporativo," out of which the "Contribuicao Industrial" and "Complemento de Imposto," the regular industrial taxes are paid to the government. These taxes at present are very low, only about $100 to $500 per ship, as the government is encouraging the industry. However, as the taxes are arbitrarily set by the Government, they are subject to sudden and large fluctuations.

Curing Industry

Equipment

There are 23 "secas," or dryers in northern Portugal, all of which dry the cod naturally. The size of the establishments varies with the capacity of the ships of the owners. Usually about 15 percent of the area of a seca is storage buildings and washing tanks, the rest is composed of drying racks. The storage buildings are windowless stone and stucco constructions, to provide a fairly cool and even temperature within. To keep down moisture the interior walls are lined with wood. In shape the buildings are long and narrow with doors spaced along one side for the ends of every four to eight racks. Dolly tracks run from the storage buildings out to every two racks. The racks are wooden or concrete posts strung horizontally along the tops with non-rusting wire.

The taxation of the secas is, like that of the ships, low at the present time.

Method

The cod, when unloaded, is rough sorted and placed on wooden platforms in storage. Next it is taken to the cement washing tank where it is scrubbed free, usually by hand, of excess surface salt and filth. Usually it is again stored for a short period before drying begins. Well salted fish, even undried, will keep easily for several months if clean. For drying, the platforms of fish are placed on the dollies and wheeled out to the racks where the fish are spread by hand. One person can tend up to 40 quintals per day, but the average is considered about half of that, not because few people can handle that much but because weather conditions often shorten the working day.

Rainy or foggy days are, of course useless; but even clear days may be unsatisfactory. It has been found that the warmest possible temperature for drying purposes is 90° F. in a high wind when the evaporation keeps the temperature of the fish down. Higher temperatures cook and spoil the fish. Windy days with low humidity and a temperature between 65° and 80° are preferred. The fish are turned during the day to insure even drying and to prevent curling. When full drying days are possible, four to five days are required to complete the process, depending upon the actual drying conditions and the size and condition of the fish. The average weight loss is about 25 percent. In order to prevent water damage from rain or dew, it is necessary to store the fish every night. Dried cod may be conserved in dry storage for many months with the only effect being a slight loss of weight. If it is placed in refrigerated storage at a temperature of 35° to 40°, it will keep almost indefinitely, and the weight loss will usually remain within one percent.

Portuguese weather is most unpredictable, both as far as heat and as far as moisture are concerned. Consequently, for drying purposes many days are useless, and only parts of many other days are satisfactory. Artificial dryers are recognized as a definite need, and the first, privately owned, should be completed in Oporto in 1950. Natural curing is preferred, but the artificial dryer should prove profitable. Such drying is done by air warmed to 75°-80°, and it is a saving in that fish need not be turned and the drying can be completed in one operation requiring much less time. Uniform quality is also assured. The same company intends to build a refrigerator. The only ones at the present time are public property under the "Comissao Reguladora," one in Oporto and another in Aveiro.

After drying, the final grading is done and the fish is packed 60 kilos in each bag or "fardo."

Personnel

The 3,500 employees of the secas in the North also have a collective contract with the "Gremio dos Armadores de Navios da Pesca do Bacalhau," in the bargaining for which contract they are represented by the corporation, "Sindicato do Pessoal das Secas." The contract is a very simple one as the seca personnel are hired only by the day. The contract provides, as previously indicated, for the medical care of these persons while actually working. Wages are set at Escudos 20.00 per day for men and Escudos 16.00 for women. A whole day's pay is obligatory regardless of the time actually worked by the employees. The employer must pay an amount equivalent to 7 percent of the salaries paid, and the employees must contribute their 1/2 percent for the "Abono de Familia," which has previously been described. In addition, the Gremio makes a contribution of over $10,000 per year to the welfare fund of these workers.

Because of the seasonal nature of the work and the relatively small number of persons dependent upon only this work for their livelihood, the Sindicato has only a Lisbon office. The welfare fund and the activities carried out by it, mainly medical assistance and nurseries, have now been incorporated with the similar funds of other small syndicates in order that the services given may be more complete and efficient.

Distribution

Fresh Cod

The distribution system of codfish begins when it is discharged from the fishing vessels to the secas, for even though both ship and seca are owned by the same person, the fish must be weighed at that time. The fishermen are paid according to the discharged weights, so two delegates of the crew are present to check the weights. It is therefore necessary for the owner's representative to check the weights also. No duties are paid on fish, but it is required that a customs official observe the process too. Still another party checks these weights as it is the first step in the government's control of the commerce in codfish through the "Comissao Reguladora;" and a Gremio representative checks it for tax purposes.

"Comissao Reguladora do Comercio de Bacalhau"

This body is responsible directly to the Ministry of Economy, and therefore it is above the other bodies with which it deals as they are responsible to under-secretaries. Its purposes are to insure an equitable distribution of codfish and to set uniform grading rules. Grading criteria are difficult to set because of the differences in quality of individual fish and the differences in quality resulting from different curing and storage conditions. However, it is just this situation which requires grading rules, and five classifications have been set. They are based upon humidity content, salt content, edible percentage, and general condition. An experienced man calls the classification with only a sniff and a glance. An employee or more of the Comissao is stationed at each seca to record the landed weights, to supervise and advise upon the curing, to oversee the grading, to record the weights and supervise sacking of the dried fish. By use of these reports the Comissao has a continuous and complete record of the quantities and grades of codfish in the country except that in retail outlets.

A shortage of supply for a number of years have caused distribution difficulties which constitute the major problem for the Comissao, and it has found that the best solution to date has been complete control of the distribution processes up to the wholesale level and price setting for dried fish at all levels. Though there is no rationing at this time, the Comissao confers regularly with the governmental rationing body, the

"Intendencia de Abastecimentos," regarding codfish imports and distribution. The "Intendencia" governs foreign exchange licenses for all food imports; so the Comissao must obtain import licenses there, for national production still comprises only about 45 percent of the total consumption.

When imports of uncured fish are authorized, the owner's Gremio does the importing after receiving the necessary authorization and license from the Comissao Reguladora. The fish is then distributed among the owners and paid for by them in proportion to the capacities of their secas. Imports of this type are small for three reasons: First, they necessarily come about the same time as the arrival of the owners' own vessels; second, the amount of increase in the Portuguese fishing fleet has not yet been accompanied by a corresponding increase in curing facilities, and third, most cod exporting countries prefer to export the more valuable cured fish.

Dried cod imports are much more important, amounting as they do to 55 percent of the nation's supply. They are controlled in approximately the same way as the fresh cod imports. An import must in effect be jointly authorized by the "Intendencia de Abastecimentos" and the "Comissao Reguladora," the latter deciding how much fish is desired to meet the demand, the former deciding how much foreign exchange can be made available. The import is actually made by the "Gremio dos Armazenistas," the food wholesalers organization. The imports are allotted among the wholesalers in proportion to the capitalizations of their respective companies.

These cured fish imports do not pass directly to the wholesalers, but must first pass through the seats of the "Comissao Reguladora" in Oporto or Aveiro where refrigerators are maintained by that body. The Oporto plant can store up to 7,800 tons and the Aveiro plant slightly less. (Unused space is available to the seca owners for storage of their cured fish). As foreign sales units and grading differ from the Portuguese usage, grading and sacking must be done by the Comissao. All handling and shipping charges are paid by the Comissao. A flat charge of Escudos 1.50 per sack is made when the fish is removed for distribution to the wholesalers, regardless of the amount of the charges for the actual shipment and the time it remained under refrigeration. Usually about one escudo of the amount must be used to cover the shipping and cartage expenses, and the remaining half must cover the grading, sacking, refrigeration and administrative expenses of the Comissao.

From combining its storage figures with the reports of its representatives at the secas, the Comissao has a continuous record of how much of each quality of fish is ready for sale. From its relations with the Intendencia it has some idea about the possible quantity of future imports. By the further step of studying its statistics on demand, a percentage is set showing the extent to which the supply will

meet the demand, and weekly sales are authorized accordingly. As a rule, national production is sold before imports and at Christmas an attempt is made to meet the full demand.

Because of its possession of the best statistics on the industry, the "Comissao Reguladora" is of major importance in deciding the prices for the fish. The prices are negotiated in five way conversations by the Comissao, the Intendencia, and the contract officer of the "Gremio dos Armadores de Navios de Pesca do Bacalhau," the contract officer of the "Gremio dos Armazenistas," and a representative of the retailers. The Comissao is the senior body and as such has the final say. It is charged with representing the consumer.

The escudo has remained relatively stable; so consequently the prices have remained stationary for several years. They are set as follows:

Fish Grade	Wholesalers	Retailer	Consumer
	Escudos per 60 kilos	Escudos per 60 kilos	Escudos per kilo
1	772.00	792.00	14.40
2	712.00	732.00	13.40
3	664.00	684.00	12.60
4	580.00	600.00	11.20
5	304.00	324.00	6.60

Practically all general food retail shops, large and small, sell dried cod. At this time there are no regulations on their sales activities except the set prices. The major problem of this group is the assurance of an equitable supply system, as there are no set quotas for the various shops. In practice most wholesalers sell to their customers in rough proportion to the sizes of the outlets. If a retailer believes that he is being discriminated against, he may complain to the Intendencia. A quick check of the wholesalers records is usually sufficient to correct any distribution trouble.

Byproducts

There is no control on distribution of cheeks, tongues, or cod liver oil, nor is there any set distribution pattern for these items. The cheeks and tongues are consumed locally, and the bulk of the oil is reexported. No statistics on these exports are published, but in 1948, 24,824 kilos of cod liver oil valued at $11,473.25, F.O.B. were exported to the United States.

Portugal and International Trade in Codfish

Portugal is a major importer of codfish and will remain so for some time to come, though her imports today meet only 55 percent of the country's consumption as against 88 percent in 1934. These figures also show that Portugal cannot become an exporter of any importance within the foreseeable future. However, it is to be expected that as far as the country is able, it will meet its demands more and more by its own production.

The major reason for the increase in Portuguese fishing activity is not due to a high efficiency in the industry. Primarily it is due to the lack of foreign exchange for all the necessary and desired imports. At this time there are no indications of improvement in the country's exchange position from increased exports, so it is likely that the policy of decreasing cod imports will be continued if possible. If the program is carried far enough, it may result in a highly protected industry.

The national product cannot compete either in quality or price with the imported product, largely as a result of Portugal's location. Portugal, except Italy, is the furthest from the fishing grounds of the major producing nations, a fact which results in several adverse conditions. Ships must carry full cargoes of salt to the banks, making expensive trips. Fish must be salted when caught and stored in the holds, a fact which gives them too high a quantity of salt and lowers the efficiency of trawlers. The long trip back is also expensive and the salt factor is further increased. Then there is still the adverse factor of poor curing weather in Portugal.

On the other hand, Canada and the United Kingdom, Denmark, Iceland, and, to some extent, Norway, are blessed by the proximity of territories usuable as bases. They may land medium sized catches and then cure them under optimum conditions while going out for more. The salt factor is negligible and the working-hauling cargo problem scarcely arises, so the product is of fine quality and actual working is more efficient. Furthermore, if fishing is good, a ship will return to its home port or to any importing country with a 25 percent larger cargo than a Portuguese ship, for it will carry the dried finished product. The only apparent solutions are for Portugal to negotiate with one of the above powers for a zone where the Portuguese fleet may cure its fish, in which case the value of Portugal as an export market for them, places Portugal in a poor bargaining position; or for Portugal to send a ship with artificial drying facilities to the Banks, the economy of which is doubtful. At present Canada and Norway find the Portuguese market of sufficient importance to keep representatives stationed in the country.

Needless to say, as a producer, consumer and importer, Portugal is vitally interested in the International Convention for the Northwest Atlantic Fisheries and is represented on three of five Sub-Area Panels. Though the 1949 cod catch is reported by the Food and Agriculture Organization to be at about the 1938 level, Portugal realizes perfectly that this indicates an increasingly dangerous situation, for the catch was made with more modern fleets using more efficient fishing methods. It appears that continuance of the present fishing practices would cause an increasingly disastrous shortage. Portugal, more than most of the other participating nations, must pin her hopes on the measures of the convention being sufficient to insure maximum production for otherwise she stands to lose a basic item in the diet of nearly every one of her citizens and a means of livelihood for several thousand people.

CODFISH PRODUCTION 1939-1948

(WEIGHTS ARE IN METRIC TONS; PRICES ARE IN CONTOS. ONE CONTO EQUALS APPROXIMATELY $34.00)

PRODUCTION		1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
DRIED											
NORTH	WEIGHT	10,774	11,867	12,868	12,724	13,715	14,779	17,317	18,603	17,551	15,500
	VALUE	-	72,243	82,451	94,261	115,927	131,015	160,425	175,826	164,849	147,000
COUNTRY	WEIGHT	12,713	14,046	15,257	15,398	16,349	17,446	20,139	22,161	23,267	19,000
	VALUE	53,817	82,057	97,838	114,191	138,230	161,052	186,372	209,997	219,125	180,000
UNDRIED											
NORTH	WEIGHT	10,683	15,410	14,111	14,256	14,744	14,474	15,491	15,941	14,476	-
LUGGER'S	VALUE	25,436	30,557	56,606	63,868	73,722	79,739	85,200	87,562	79,605	-
	WEIGHT	765	2,948	3,392	3,153	4,397	6,707	8,983	10,821	11,716	-
TRAWLER'S	VALUE	1,528	5,896	10,166	12,611	21,987	36,710	49,409	59,307	64,165	-
TOTAL	WEIGHT	11,448	18,358	17,503	17,409	19,141	21,181	24,484	26,762	26,192	-
	VALUE	26,964	36,453	66,872	76,479	95,709	116,449	134,609	146,869	143,770	-
COUNTRY	WEIGHT	14,534	20,541	20,702	21,014	22,803	24,925	28,849	31,670	34,489	-
	VALUE	32,268	46,474	81,249	94,163	114,018	137,077	158,235	173,908	189,243	-
OIL											
NORTH	WEIGHT	61	90	175	151	204	174	139	169	215	-
	VALUE	103	171	830	889	925	913	711	922	1,191	-
COUNTRY	WEIGHT	65	93	186	154	237	246	289	249	491	-
	VALUE	114	179	908	905	1,585	1,345	1,499	1,351	2,674	-

NOTE: 1948 STATISTICS ARE ESTIMATES AS THE OFFICIAL STATISTICS HAVE NOT BEEN RELEASED.
1949 PRODUCTION IS EXPECTED TO BE SUPERIOR TO 1947 IN SPITE OF THE LOSS OF TWO LUGGERS.

INTERNATIONAL TRADE IN CODFISH, 1939-1948

(WEIGHTS ARE IN METRIC TONS; PRICES ARE IN CONTOS. ONE CONTO EQUALS APPROXIMATELY $34.00)

		1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
DRIED					IMPORTS						
DENMARK	WEIGHT	14	3,229	958	-	-	-	-	-	7	-
	VALUE	43	10,710	6,418	-	-	-	-	-	82	-
NEWFOUNDLAND	WEIGHT	8,121	9,862	10,404	15,853	11,215	12,333	9,217	7,734	7,951	8,512
	VALUE	21,716	37,311	51,031	103,003	90,029	109,760	81,986	73,480	79,649	86,715
NORWAY	WEIGHT	16,837	6,962	-	-	-	-	-	9,159	19,605	14,754
	VALUE	44,159	17,262	-	-	-	-	-	93,741	212,408	161,049
ICELAND	WEIGHT	-	5,295	2,678	2,776	83	-	-	-	-	-
	VALUE	-	19,057	13,916	24,094	565	-	-	-	-	-
OTHERS	WEIGHT	519	43	13	-	-	-	20	55	55	37
	VALUE	1,345	172	90	-	-	-	200	608	626	540
TOTAL	WEIGHT	25,491	26,961	14,053	18,629	11,298	12,333	9,237	16,948	27,620	23,302
	VALUE	67,263	84,542	71,455	127,097	90,594	109,760	82,186	167,829	292,766	248,304
UNDRIED	(SOURCES: DENMARK, GREENLAND, ICELAND, FRANCE, NEWFOUNDLAND, NORWAY AND SWEDEN IN VARYING AMOUNTS.)										
TOTAL	WEIGHT	7,377	2,185	2,909	4,952	1,989	-	-	329	5	3
	VALUE	9,331	6,043	9,595	24,696	12,899	-	-	4,399	76	21
					EXPORTS (ALL DRIED)						
TOTAL	WEIGHT	143	338	32	10	14	49	89	49	56	56
	VALUE	698	1,770	236	92	159	573	1,056	610	736	724

CODFISHING VESSELS AND PERSONNEL, 1939-1948

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
LUGGERS:										
NORTH	42	38	38	36	36	33	36	39	33	35
COUNTRY	49	45	45	44	44	41	44	50	48	47
TRAWLERS:										
NORTH	1	2	3	3	4	7	10	12	12	-
COUNTRY	1	2	3	3	4	7	10	12	14	-
DORIES:										
NORTH	1,740	1,596	1,628	1,568	1,778	1,846	1,822	1,728	1,428	-
COUNTRY	2,408	1,898	1,925	1,932	2,131	2,200	2,174	2,089	2,134	-
TOTAL TONNAGE LUGGERS & TRAWLERS:										
NORTH	15,470	16,465	17,839	18,144	20,088	22,186	28,170	33,297	30,398	-
COUNTRY	18,384	19,476	20,770	21,502	23,541	25,637	31,621	39,022	40,322	-
FISHERMEN:										
NORTH	2,009	2,049	1,933	1,426	1,499	1,418	1,605	1,803	1,882	2,342
COUNTRY	2,350	2,394	2,276	2,223	2,513	2,211	2,861	3,346	3,303	3,814

NOTE: 1948 OFFICIAL STATISTICS HAVE NOT YET BEEN RELEASED; THEREFORE, 1948 FIGURES ARE ESTIMATES.

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